

# CSA Hazardous Area Approvals Fisher™ FIELDVUE™ DVC2000 Digital Valve Controller

## Hazardous Area Classifications and Special Instructions for “Safe Use” and Installations in Hazardous Locations

Certain nameplates may carry more than one approval, and each approval may have unique installation/wiring requirements and/or conditions of “safe use”. These special instructions for “safe use” are in addition to, and may override, the standard installation procedures. Special instructions are listed by approval.

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### Note

This information supplements the nameplate markings affixed to the product and the DVC2000 quick start guide ([D103203X012](#)) and instruction manual ([D103176X012](#)), available from your [Emerson sales office](#) or at Fisher.com.

Always refer to the nameplate itself to identify the appropriate certification.

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### **⚠ WARNING**

**Failure to follow these conditions of “safe use” could result in personal injury or property damage from fire or explosion, or area re-classification.**

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### Intrinsically Safe, Non-Incendive

Refer to figure 1 for a typical DVC2000 CSA approval nameplate and figure 2 for installation drawing GE12444.

Figure 1. Typical CSA Nameplate

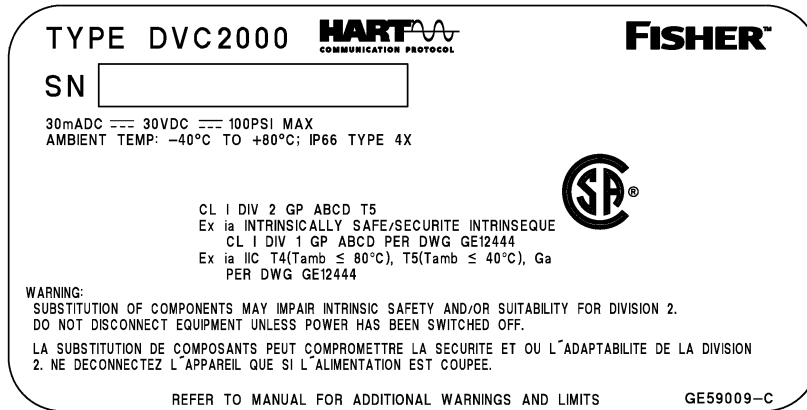


Figure 2. CSA Installation Drawing GE12444

- 1 EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE CANADIAN ELECTRICAL CODE (CEC) PART 1:
- 2 BARRIERS MUST BE CSA APPROVED WITH ENTITY PARAMETERS AND ARE TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S I.S. INSTALLATION INSTRUCTIONS.
- 3 THE ENTITY CONCEPT ALLOWS INTERCONNECTION OF INTRINSICALLY SAFE APPARATUS TO ASSOCIATED APPARATUS, NOT SPECIFICALLY EXAMINED IN SUCH COMBINATION. THE CRITERIA FOR INTERCONNECTION IS THAT THE VOLTAGE ( $V_{max}$ ) AND THE CURRENT ( $I_{max}$ ) OF THE INTRINSICALLY SAFE APPARATUS MUST BE EQUAL TO OR GREATER THAN THE VOLTAGE ( $V_{oc}$ ) AND CURRENT ( $I_{sc}$ ) DEFINED BY THE ASSOCIATED APPARATUS. IN ADDITION, THE SUM OF THE MAXIMUM UNPROTECTED CAPACITANCE ( $C_i$ ) AND INDUCTANCE ( $L_i$ ) OF EACH INTRINSICALLY SAFE APPARATUS, AND THE INTERCONNECTING WIRING, MUST BE LESS THAN THE ALLOWABLE CAPACITANCE ( $C_a$ ) AND INDUCTANCE ( $L_a$ ) DEFINED BY THE ASSOCIATED APPARATUS. IF THESE CRITERIA ARE MET, THEN THE COMBINATION MAY BE CONNECTED.  
 FORMULAS -  $V_{max} > V_{oc}$ ,  $I_{max} > I_{sc}$ ,  $C_i + C_{cable} < C_a$ ,  $L_i + L_{cable} < L_a$

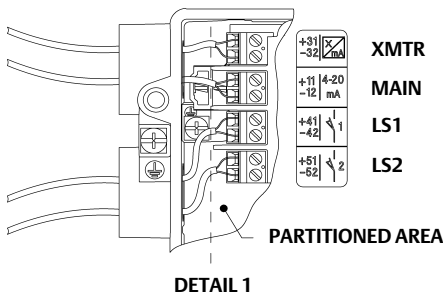
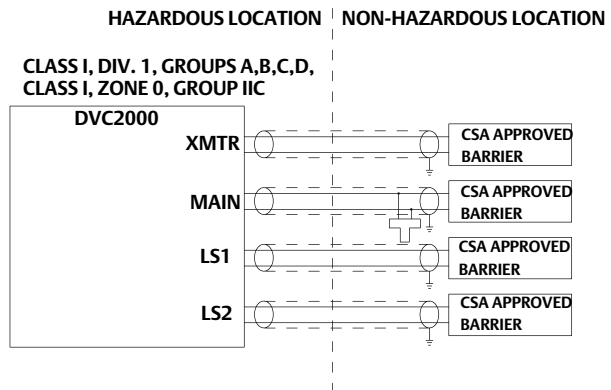
4 ENTITY PARAMETERS FOR EACH I.S. CIRCUIT ARE AS FOLLOWS:

CIRCUIT	$V_{Max}$ (Ui)	$I_{Max}$ (Ii)	$C_i$	$L_i$	$P_{MAX}$
XMTR	28Vdc	100mA	5nF	0 mH	1W
MAIN	30Vdc	130mA	10.5nF	0.55 mH	1W
LS1	16Vdc	76mA	5nF	0 mH	1W
LS2	16Vdc	76mA	5nF	0 mH	1W

5 WHERE MULTIPLE IS CIRCUITS ARE USED:

- EACH I.S. CIRCUIT MUST BE SHIELDED TWISTED PAIR CABLE.
- I.S. CIRCUITS MUST ENTER ENCLOSURE VIA CONDUIT ENTRIES AS SPECIFIED IN DETAIL 1.
- CABLE INSULATION AND SHIELD MUST EXTEND TO WITHIN PARTITIONED AREA (SEE DETAIL 1).
- XMTR, LS1, AND LS2 CIRCUITS ARE OPTIONAL.

6 IF HAND-HELD COMMUNICATOR OR MULTIPLEXOR IS USED, IT MUST BE CSA CERTIFIED WITH ENTITY PARAMETERS AND INSTALLED PER THE MANUFACTURER'S CONTROL DRAWING.



**WARNING**  
 THE APPARATUS ENCLOSURE CONTAINS ALUMINUM AND IS CONSIDERED TO CONSTITUTE A POTENTIAL RISK OF IGNITION BY IMPACT OR FRICTION. CARE MUST BE TAKEN DURING INSTALLATION AND USE TO PREVENT IMPACT OR FRICTION.

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